



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|---------------------|------------------|
| 10/519,517                | 09/16/2005  | Dieter Reichel       | CBZ-1274            | 2514             |
| 22827                     | 7590        | 09/20/2007           | EXAMINER            |                  |
| DORITY & MANNING, P.A.    |             |                      | OLSON, LARS A       |                  |
| POST OFFICE BOX 1449      |             |                      | ART UNIT            | PAPER NUMBER     |
| GREENVILLE, SC 29602-1449 |             |                      | 3617                |                  |
|                           |             |                      | MAIL DATE           | DELIVERY MODE    |
|                           |             |                      | 09/20/2007          | PAPER            |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                               |                                 |  |
|------------------------------|-------------------------------|---------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/519,517 | Applicant(s)<br>REICHEL, DIETER |  |
|                              | Examiner<br>Lars A. Olson     | Art Unit<br>3617                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-28, 30-41, 46-50 and 52-55 is/are rejected.
- 7) ☒ Claim(s) 29, 42-45 and 51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01132006</u> . | 6) <input type="checkbox"/> Other: ____  |

### DETAILED ACTION

1. A preliminary amendment was received from the applicant on January 13, 2006.
2. Claims 1-19 have been canceled.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 20-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 20 and 27 recite the limitation "the tunnel tube" in line 2. There is insufficient antecedent basis for this limitation in the claims.

6. Claim 21 is presented in dependent form, depending from Claim 21. Therefore, it is unclear to the examiner whether the applicant intended to present the claim in independent or dependent form.

7. Claims 21-26 recite the limitation "The method" in line 1. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3617

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 20-24, 27, 28 and 30-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards (US 3,404,638).

Edwards discloses the same method for operating a rail vehicle in a tunnel as claimed, as shown in Figures 1-25, that is comprised of the step of directing air that is displaced by a rail vehicle, defined as Part #3, through at least one channel, defined as Part #23, that is located outside of a cylindrical tunnel, defined as Part #1, and connected to said tunnel by a plurality of openings, defined as Part #25, that are closeable, as shown in Figure 2. Air that is displaced by said vehicle is directed around said vehicle through said channel and then returns into said tunnel. A pump or turbine, defined as Part #33, is provided to assist with the conduction of air from said tunnel through said channel, as shown in Figure 2.

Edwards also discloses the same track system for a rail vehicle as claimed, as shown in Figures 1-25, that is comprised of a tunnel, defined as Part #1, with guide rails, defined as Part #17, and at least one channel, defined as Part #23, that is located outside of said tunnel and connected to said tunnel by a plurality of openings, defined as Part #25, that are closeable, where air that is displaced by a vehicle, defined as Part #3, is directed through said openings and into said channel, as shown in Figure 2. A pump or turbine, defined as Part #33, is also provided to assist with the conduction of air from said tunnel through said channel, as shown in Figure 2.

Art Unit: 3617

10. Claims 46-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Allan (GB 1,104,746).

Allan discloses the same track system for a rail vehicle as claimed, as shown in Figure 3, that is comprised of a rail vehicle, defined as Part #1, a tunnel, defined as Part #2, with guide rails, defined as Parts #8 and 9, and a passage through said vehicle, defined as Part #20, that is configured to direct air back into said tunnel behind said vehicle. A turbine, defined as Part #19, is disposed within said vehicle, as shown in Figure 3, to assist in conduction of air that is displaced by said vehicle.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allan in view of Edwards.

Allan, as set forth above, discloses all of the features claimed except for the use of a channel in communication with said tunnel that is configured to conduct a portion of the air displaced by said vehicle.

Edwards, as previously cited, discloses a track system for a rail vehicle that is comprised of a tunnel, defined as Part #1, with guide rails, defined as Part #17, and at least one channel, defined as Part #23, that is located outside of said tunnel and

Art Unit: 3617

connected to said tunnel by a plurality of openings, defined as Part #25, that are closeable, where air that is displaced by a vehicle, defined as Part #3, is directed through said openings and into said channel, as shown in Figure 2. A pump or turbine, defined as Part #33, is also provided to assist with the conduction of air from said tunnel through said channel, as shown in Figure 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a channel for conducting air from a tunnel around a vehicle, as taught by Edwards, in combination with the track system as disclosed by Allan for the purpose of providing a track system for a rail vehicle with a means for increasing vehicle speed by directing air from in front of said vehicle to the rear of said vehicle, where the resulting differential air pressure assists in moving said vehicle forward.

### ***Allowable Subject Matter***

13. Claims 29, 42-45 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jackson et al. (US 5,460,098) discloses a vehicle with an air

Art Unit: 3617

duct that travels through a tubular guideway. Minovitch (US 4,148,260) discloses a high speed vehicle that travels within a vacuum tube.

15. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

September 17, 2007

LARS A. OLSON  
PRIMARY EXAMINER

*Lars Olson*  
9/17/07

|  |                                     |                              |
|--|-------------------------------------|------------------------------|
| (Rev. 5/92)<br>Information Disclosure Statement List<br>By Applicant(s)<br>Under 37 CFR Section 1.98(a) (1)<br>(Use several sheets if necessary) | Attorney Docket Number:<br>CBZ-1274 | Serial Number:<br>10/519,517 |
|  | Applicant: DIETER REICHEL           |                              |
|  | Filing Date:<br>DECEMBER 23, 2004   | Group Art Unit:<br>UNKNOWN   |
| Confirmation No:<br>2514   |                                     |                              |



## NOTE:

If no indication is made in the column marked "COPY NOTE," the required legible copy of the corresponding item is submitted herewith; otherwise, a copy is not required and/or not submitted, for the following reason(s) [corresponding reason number is listed in "COPY NOTE" column]

- (1) This item is cumulative, per Rule 98(c)
- (2) A copy of this item was previously cited by or submitted to the U.S. Patent and Trademark Office in:  
     USSN \_\_\_\_\_, filed \_\_\_\_\_, or  
     USSN \_\_\_\_\_, filed \_\_\_\_\_;  
     Relied on under 35 U.S.C. Section 120, per Rule 98(d)
- (3) Both reasons (1) and (2) apply
- (4) No legible complete copy is possessed, in custody of controlled, or readily available
- (5) Per the U.S. Patent and Trademark Office's waiver of Rule 98(a)(2)(i), the item is a U.S. patent or patent application publication, and the present application was filed after June 30, 2003.

## U.S. PATENT DOCUMENTS

| EXAMINER INITIALS | PATENTEE NAME | PATENT NUMBER | ISSUE DATE | COPY NOTE |
|-------------------|---------------|---------------|------------|-----------|
| /LO/              | STRAUSS       | 2 0 1 3 7 0 3 | 09/10/1935 | 5         |
| /LO/              | MINOVITCH     | 3 9 5 4 0 6 4 | 05/04/1976 | 5         |
| /LO/              | SUPPES        | 5 1 4 6 8 5 3 | 09/15/1992 | 5         |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIALS | COUNTRY | DOCUMENT NUMBER  | PUBLICATION DATE | TRANSLATION | COPY NOTE |
|-------------------|---------|------------------|------------------|-------------|-----------|
|                   |         |                  |                  | YES NO N/A  |           |
| /LO/              | DE      | 4 4 1 4 7 7 8 C2 | 10/05/1995       | X           |           |
| /LO/              | DE      | 3 1 1 7 1 4 7 C2 | 11/18/1982       | X           |           |
| /LO/              | DE      | 4 1 0 6 2 3 1 A1 | 09/12/1991       | X           |           |
| /LO/              | FR      | 1 2 9 5 9 6 3    | 06/15/1962       |             | X         |
| /LO/              | GB      | 1 1 0 4 7 4 6 A  | 02/28/1968       | X           |           |
| /LO/              | WO      | 0 1 0 9 4 8 4 A2 | 02/08/2001       | X           |           |

\*"NO" means that no copy of an English language translation is within the possession, custody, or control of, or is readily available to any individual designated in Rule 56(c).

| EXAMINER INITIALS | OTHER DOCUMENTS   | COPY NOTE                     |
|-------------------|---|-------------------------------|
| /LO/              | Specify author (if any), Title, Pertinent Pages, Date & Place of Publication  |                               |
| /LO/              | GERMAN SEARCH REPORT  | 03/21/2003                    |
| /LO/              | PCT SEARCH REPORT   | 08/19/2003                    |
| EXAMINER          | /Lars Olson/ (09/10/2007)   | DATE CONSIDERED<br>09/10/2007 |
| Examiner:         | initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant. |                               |